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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/601,303

06/18/2003

Uwe Fischer

N&N-IT-337

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08/16/2004

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EXAMINER

KANG, JULIANA K

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,303

Applicant(s)

FISCHER ET AL.

Examiner

Juliana K. Kang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/18/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Inventorship

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Specification

2. Applicant's assistance is requested to correct any other errors that may be noticed in the application.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

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(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 4, 11, 13, 15, 20, 22 and 23 are rejected under 35

U.S.C. 102(e) as being anticipated by Ngo (U.S. Patent 6,450,697 B1).

Regarding claims 1, Ngo discloses an optical coupling system, comprising: at least one optical connector (10) having at least one optical fiber end piece (30) and at least one component (36, EMI shield [see column 2 line 66]); and a mating coupling element (12) having a socket (18) for receiving said optical connector (10) and a covering selected from the group consisting of shielding plates and conductive housings (20), said covering being able to be connected in a conducting manner to a metallic structure (12) (see column 2 lines 23-35).

Regarding claims 2, 4 and 11, Ngo discloses an inner connector housing (36) disposed in an outer connector housing (28) formed of nonmetallic components (plastic) (see column 2 line 46). Both plastic and metal are light absorbing materials.

Regarding claim 13, Ngo discloses an optical coupling system, comprising: at least one optical connector (10) having at least one optical fiber end piece (30) and at least one metal conductive component (36), said optical connector further having a contact device (78) with a latching element (42); and a mating coupling element (12) having a socket (18) for receiving said optical connector and a cover selected from the group consisting of shielding plates and conductive housings (20), said cover being able to be connected in an

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conducting manner to a metallic structure (12) (see column 2 lines 23-35), and in an inserted state of said optical connector in said mating coupling element, said contact device connecting in an electrically conducting manner said component to said cover of said mating coupling element (see column 2 lines 27-28 and column 3 lines 60-66), said mating coupling element having latching hooks (52) for engaging said latching element (see column 2 lines 47-50 and Fig. 1).

Regarding claim 15, Ngo discloses a housing (28) and said contact device including contact springs (76) protruding from said housing (see Figs 1 and 2).

Regarding claim 20, Ngo discloses an optical connector for an optical coupling system, the optical connector comprising: at least one optical fiber end piece (30); and at least one component (36) formed of a material for absorbing electromagnetic waves.

Regarding claims 22 and 23, as described above Ngo discloses all the claimed limitations.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-10, 12, 14, 16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo (U.S. Patent 6,450,697 B1).

Regarding claims 5-7, as described above Ngo teaches electromagnetic radiation absorbent material. However, Ngo does not specifically teach the claimed attenuation values. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an absorbent material that provides any attenuation including attenuation of at least -0.5dB/cm, -3 dB/cm or -10 dB/cm in Ngo to provide the maximum coupling efficiency for a desired application and it has been held to be within the general skill of a worker in the art to select a known material on the basis for its suitability for the intended use as a matter of obvious design choice.

Regarding claims 12 and 14, even though Ngo do not specifically teach that the mating coupling element is an optoelectronic transceiver, Ngo clearly teaches the electrical device such as a computer, network router or telephone that is connected to the optical connector (10). Thus, one with ordinary skill in the art would recognize an optoelectronic transceiver in Ngo to change the optical signals into electrical signals and the electrical signals into optical signals for processing.

Regarding claim 8-10, 16 and 19, as described above Ngo disclose the claimed invention except the outer connector housing being one of metallized and formed of an electrically conductive material. Ngo teaches using the inner housing made of metal for shielding electromagnetic waves. Metal would also provide ruggedness over the plastic material. Thus, it would have been obvious to one having ordinary skill in the art to also use metal (further absorbent material) for the outer housing to provide better shielding of electromagnetic

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waves and to provide sturdier optical connector. Ngo also do not teach the attenuation values of absorbent material and further absorbent material being -0.5dB/cm, -3 dB/cm or -10 dB/cm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an absorbent material for inner and outer housing that provides any attenuation including attenuation of at least -0.5dB/cm, -3 dB/cm or -10 dB/cm in Ngo to provide the maximum coupling efficiency for a desired application and it has been held to be within the general skill of a worker in the art to select a known material on the basis for its suitability for the intended use as a matter of obvious design choice.

7. Claims 3, 17, 18, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo (U.S. Patent 6,450,697 B1) further in view of Weigel (U.S. Patent 6,287,016 B1).

As described above Ngo teaches the claimed invention except an anti-kink protector being one of metallized and formed of an electrically conductive material. Weigel teach an optical connector having an anti-kink protector (59) placed at the end of the optical connector to protect the optical fibers. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an anti-kink protector in Ngo as taught by Weigel to protect the optical fibers from kinking. Also using the metallized anti-kink protector in Ngo and Weigel would have obvious to one with ordinary skill in the art to provide the optical connector with more sturdiness and to provide further electromagnetic shielding.

Conclusion

8. The prior art documents submitted by applicant have been considered and made of record (note the attached copy of form PTO-1449).

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Arp et al (U.S. Patent 6,158,899) teach an optical connector housing formed of either connective plastic or non conductive plastic plated with a conductor to provide EMI shielding (see column 4 lines 57-62). Clapp, Jr. et al (U.S. Patent 6,457,874 B1), Branch et al (U.S. Patent 6,335,869 B1) and Sampson et al (U.S. Patent 4,840,451) teach shielded fiber optic connector assembly. Hoffmeister et al (U.S. Patent 6,421,495 B1) teach an optical fiber connector having an anti-kink sheath (20).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-2348. The examiner can normally be reached on Mon. & Fri. 10:00-6:00 and Tue. & Thur. 10:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Juliana Kang
August 12, 2004